

WHAT IS CLAIMED IS:

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1. A semiconductor light emitting device comprising:
a hetero-configuration having an active layer that emits light when charge carriers are injected, a first clad layer, and a second clad layer, the active layer being interposed between the clad layers, the first and second clad layers keeping the injected charge carriers in the active layer;

a first and a second electrode, the hetero-configuration being interposed between the electrodes; and

a first dense defect-injected layer, provided between the first electrode and the hetero-configuration, the first dense defect-injected layer being made of material being more fragile than the hetero-configuration, the first dense defect-injected layer preventing defects injected into the hetero-configuration.

2. The device according to claim 1, further comprising a second dense defect-injected layer, provided between the second electrode and the hetero-configuration, the second dense defect-injected layer being made of material being more fragile than the hetero-configuration, the second dense defect-injected layer preventing defects injected into the hetero-configuration.

3. The device according to claim 1, wherein the hetero-configuration is a double hetero-configuration in which the active layer is undoped, and the first and second clad layers are doped for a specific conductivity type.

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4. The device according to claim 1, further comprising a current diffusion layer, provided between the first electrode and the first dense defect-injected layer, the current diffusion layer diffusing current applied through the first electrode.

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5. The device according to claim 1, further comprising a semiconductor substrate provided between the second electrode and the hetero-configuration and a buffer layer provided on the semiconductor substrate that prevents defects being generated in the semiconductor substrate or prevents the defects being expanded into the active layer.

6. A semiconductor light emitting device comprising:
a hetero-configuration having an active layer that emits light when charge carriers are injected, a first clad layer, and a second clad layer, the active layer being interposed between the clad layers, the first and second clad layers keeping the injected charge carriers in the active layer;

a first and a second electrode, the hetero-configuration being interposed between the electrodes; and

a dense defect-injected layer, provided between the first electrode and the hetero-configuration, the dense defect-injected layer being made of material being more fragile than the hetero-configuration, the dense defect-injected layer preventing defects injected into the hetero-configuration;

a current diffusion layer, provided between the first electrode and the dense defect-injected layer, the current diffusion layer diffusing current applied through the first electrode;

a contact layer, provided between the first electrode and the current diffusion layer, the contact layer making ohmic contact between the first electrode and the current diffusion layer;

a semiconductor substrate, provided between the second electrode and the hetero-configuration;

a buffer layer, provided on the semiconductor substrate, the buffer layer preventing defects being generated in the semiconductor substrate or prevents the

defects being expanded into the active layer; and
a reflective layer, provided on the buffer layer, the reflective layer reflecting light emitted by the active layer so that the emitted light does not enter the buffer layer and semiconductor substrate.

7. A semiconductor light emitting device comprising:
a hetero-configuration having an active layer that emits light when charge carriers are injected, a first clad layer and a second clad layer, the active layer being interposed between the clad layers, the first and second clad layers keeping the injected charge carriers in the active layer;

a first and a second electrode, the hetero-configuration being interposed between the electrodes;

a first dense defect-injected layer, provided between the first electrode and the hetero-configuration, the first dense defect-injected layer being made of material being more fragile than the hetero-configuration, the first dense defect-injected layer preventing defect injected into the hetero-configuration;

a current diffusion layer, provided between the first electrode and the first dense defect-injected layer, the current diffusion layer diffusing current applied through the first electrode;

a contact layer, provided between the first electrode and the current diffusion layer, the contact layer making ohmic contact between the first electrode and the current diffusion layer;

a second dense defect-injected layer, provided between the second electrode and the hetero-configuration, the second dense defect-injected layer being made of material being more fragile than the hetero-configuration, the second dense defect-injected layer preventing defects injected into the hetero-configuration; and

a buffer layer, provided on the second electrode,

the buffer layer preventing defects being generated in the semiconductor substrate or prevents the defects being expanded into the active layer.

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